

STAT

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 10/17/01 BY 60322

CLASSIFICATION

RESTRICTED
CENTRAL INTELLIGENCE GROUP
INFORMATION REPORT

COUNTRY USSR

DATE DISTR 16 January 1946

SUBJECT Radioactive Metals

NO. OF PAGES 2

PLACE
ACQUIREDNO. OF ENCLS.
(LISTED BELOW)DATE
ACQUIREDSUPPLEMENT TO
REPORT NO.

STAT

CIR EVALUATION OF CONTENT						
CONFIRMED BY OTHER SOURCES	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED	NOT EVALUATED
I	II	III	IV	V	VI	VII

STAT

WORK OF THE INSTITUTE OF RARE METALS

Sect. 6 Scientific Research

Girednet is carrying on the work of searching for methods of extracting rare and radioactive elements in pure form or in the form of salts from their ores, as well as from waste products and scrap of various branches of industry.

Rare elements are those elements of the earth's crust the ores of which are seldom found. They usually contain a low percentage of the desired element and the extraction of the element from the ore is very difficult.

Besides radium, tungsten, vanadium, molybdenum, uranium, zirconium, selenium, lithium, beryllium and a series of others are also included in this group. Contemporary technology is interested in them because of the extraordinary properties they have which iron, copper, zinc and other ordinary widely dispersed elements do not possess. The addition of a small quantity of vanadium, tungsten, or molybdenum to steel greatly improves its quality. From the carbides of tungsten and titanium a superhard alloy can be made which can be used to machine stone, glass, the hardest steel, etc., very easily. A very small quantity of selenium added to glass makes it absolutely colorless and transparent. Cadmium and bismuth form an alloy which floats in hot water (at 70°).

Radium is used in medicine, in research laboratories studying the structure of matter, and in preparing phosphorescent compounds. The cost of these elements is high, and for some it even surpasses that of gold, silver, and platinum, which form an independent group of noble metals. But the properties of these rare elements justify this value in practice.

The most important work of Girednet in the current year is on radium, vanadium, cobalt, dispersed rare elements, and even antimony, mercury and bismuth. A method is being developed to extract radium from the poor ores

- 1 -

CLASSIFICATION				DISTRIBUTION			
STATE	☒ NAVY	☒					
WAR	☒ AIR	☒					

WARNING

THIS DOCUMENT CONTAINS INFORMATION PERTAINING TO ATOMIC ENERGY WITHIN THE MEANING OF SECTION 1(b) (2) AND SECTION 80, PUBLIC LAW 505 - 70TH CONGRESS, THE ATOMIC ENERGY ACT OF 1946. ITS DISSEMINATION OR THE REVELATION OF ITS CONTENTS TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

RESTRICTED

RESTRICTED

RESTRICTED

STAT

of Central Asia and from the so-called boring waters of oil wells. A more profound method of extracting vanadium by processing iron-titanium ores is being sought. Work is being carried on in the study of the composition of ores of industrial waste products in connection with dispersed rare elements. These are elements which are found in ores in the form of negligible admixtures. For example, in the process of working copper and lead-zinc ores, some waste products are rich with these elements, and it then becomes easier to extract them in a pure form. Antimony and mercury, although not considered rare elements, resemble them in the conditions under which they are found in nature. In Giredmet, methods are being developed to extract these metals from the poor ferganite beds of Kirgiz.

Giredmet is one of the new institutes, having come into independent existence only since the end of 1931. The development of its work is retarded by the lack of sufficient capital and the lack of their own experimental plant for testing the methods worked out by them on a smaller scale.

- E N D -

- 2 -

RESTRICTED

RESTRICTED